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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/809,902 | 03/26/2004 | Makoto Miyamoto | YMOR:197A | 7694 |
| 6160 | 7590 | 11/26/2004 | EXAMINER | |
| PARKHURST & WENDEL, L.L.P. 1421 PRINCE STREET SUITE 210 ALEXANDRIA, VA 22314-2805 | | | WATKO, JULIE ANNE | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2653 | |

DATE MAILED: 11/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/809,902

Applicant(s)

MIYAMOTO ET AL.

Examiner

Julie Anne Watko

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-6 and 8-13 is/are pending in the application.
- 4a) Of the above claim(s) 8-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☒ Certified copies of the priority documents have been received in Application No. 09/815,276.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 03/26/2004.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of species B, drawn to Figs. 8-10, currently claims 2-6, in the reply filed on August 5, 2004, is acknowledged. The traversal is on the ground(s) that serious burden is lacking. This is not found persuasive because some issues germane to the patentability of claim 10 would not be germane to the patentability of elected claim 2, for example.

The requirement is still deemed proper and is therefore made FINAL.

2. Upon further consideration, the Examiner has determined that claims 2-3 are NOT generic insofar as they are not readable on the species on which claim 10 is readable. Specifically, claim 2 recites "wherein said actuator and said inertial arm have balanced mass with respect to respective centers of rotation" in the last 2 lines, and claim 10 recites "a line connecting the center of rotation and a mass center of gravity of said actuator making an acute angle with a line connecting the center of rotation and a mass center of gravity of said inertial arm" in the last 4 lines. Because the actuator and the inertial arm in the elected invention are mass balanced about their centers of rotation, the two points defining each geometric "line" both have the same location, such that each geometric line recited in claim 10 is undefined for any apparatus describable by claim 2.

The Examiner apologizes for any confusion caused by the erroneous indication of claims 2-3 as generic.

3. Claims 8-13 are withdrawn from consideration as drawn to non-elected species. Claims 2-6 are hereby examined on the merits.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 2-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boutaghou (US PAP No. 2002/0054455 A1) in view of Mastache (US Pat. No. 5528437).

As recited in claim 2, Boutaghou shows a disk drive system comprising an actuator 214 having a head arm 226 mounted with a slider 222 having a head element 220 for recording data in a disk recording medium and reading the recorded data, unloading said head arm to a parking position (see Fig. 2) and loading said head arm from said parking position such that said slider comes close to a surface of said disk recording medium; an inertial arm rotatably supported, engaging said actuator when said head arm is in or near said parking position (see Fig. 3) and releasing the engagement with said actuator (see Fig. 2) when said head arm is in or near a position close to said disk recording medium; and energizing means 255 for holding a position of

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said inertial arm in a position where the engagement with said actuator is released (“torsion spring 255 (or other means) urges the arm 251 up against latch stop 253 to hold the lock in its open position”, see ¶ 0029), wherein said inertial arm has balanced mass with respect to its center of rotation (“inertial lock 250 is a rigid body, rotationally balanced”, see ¶ 0029).

As recited in claim 2, Boutaghou is silent regarding whether said actuator has balanced mass with respect to its center of rotation.

As recited in claim 2, Mastache shows that an actuator has balanced mass with respect to its center of rotation (“balanced rotary actuators are insensitive to linear shock”, see col. 2, lines 3-5).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to balance the actuator of Boutaghou as taught by Mastache. The rationale is as follows: one of ordinary skill in the art would have been motivated to balance the actuator in order to render the disk drive of Boutaghou insensitive to linear shock as taught by Mastache (see col. 2, lines 3-5).

As recited in claim 3, Boutaghou is silent regarding whether a ratio of inertia of said actuator and said inertial arm is equal to a ratio of a distance from the center of rotation of said actuator to an engaging part and a distance from the center of rotation of said inertial arm to the engaging part.

As recited in claim 3, Mastache shows that a ratio of inertia of said actuator and said inertial arm is equal to a ratio of a distance from the center of rotation of said actuator to an engaging part and a distance from the center of rotation of said inertial arm to the engaging part (see col. 6, line 35).

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the disk drive of Boutaghou with the ratios taught by Mastache. The rationale is as follows: one of ordinary skill in the art would have been motivated to make forces balance so that rotation is zero, such that without the addition of external control over the balanced rotary actuator latch and the use only of the forces resulting from rotary acceleration of the disk drive support caused by rotary shock, the rotary actuator arm assembly is retained in latched or parked position as taught by Mastache (see col. 6, lines 2-11).

As recited in claim 4, Boutaghou shows a disk drive system (see teachings above for claim 2.)

As recited in claim 4, Boutaghou is silent regarding the inertial arm having a wind receiver for receiving a force of air flow produced by rotation of said disk recording medium.

As recited in claim 4, Mastache discloses a wind receiver for receiving a force of air flow produced by rotation of said disk recording medium ("air vanes", see col. 1, line 33).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add an air vane to the inertial arm of Boutaghou as taught by Mastache. The rationale is as follows: one of ordinary skill in the art would have been motivated to add the air vane to the inertial arm in order to minimize electrical energy requirements as taught by Mastache (see col. 1, lines 32-36).

Regarding claim 5: See teachings, rationale and motivation for combining teachings above for claim 2.

Regarding claim 6: See teachings, rationale and motivation for combining teachings above for claim 3.

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Conclusion

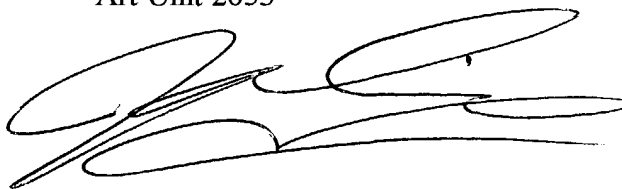
7. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julie Anne Watko whose telephone number is (703) 305-7742. The examiner can normally be reached on Tues, Thurs and Fri 10AM-10PM, alternate Saturdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William R. Korzuch can be reached on (703)305-6137. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Julie Anne Watko
Primary Examiner
Art Unit 2653

November 23, 2004
JAW

A handwritten signature in black ink, appearing to read 'Julie Anne Watko', with a stylized, flowing script.